CLAIMS

1. An isolated polynucleotide which encodes a protein comprising the amino acid sequence of SEQ ID NO:2.

2. The isolated polynucleotide of Claim 1, wherein said protein has LysR1 transcriptional reguatory activity.

3. An isolated polynucleotide, which comprises SEQ ID NO:1.

4. An isolated polynucleotide which is complimentary to the polynucleotide of Claim 3.

5. An isolated polynucleotide which is at least 70% identical to the polynucleotide of Claim 3.

6. An isolated polynucleotide which is at least 80% identical to the polynucleotide of Claim 3.

7. An isolated polynucleotide which is at least 90% identical to the polynucleotide of Claim 3.

8. An isolated polynucleotide which hybridizes under stringent conditions to the polynucleotide of Claim 3; wherein said stringent conditions comprise washing in 5X SSC at a temperature from 50 to 68°C.

9. The isolated polynucleotide of Claim 3, which encodes a protein having LysR1 transcriptional regulatory activity.

10. An isolated polynucleotide which comprises at least 15 consecutive nucleotides of the polynucleotide of Claim 3.

11. The isolated polynucleotide of Claim 10 which comprises SEQ ID NO:3.

12. A vector comprising the isolated polynucleotide of Claim 1.

13. A vector comprising the isolated polynucleotide of Claim 3.

14. A host cell comprising the isolated polynucleotide of Claim 1.

15. A host cell comprising the isolated polynucleotide of Claim 3.

16. The host cell of Claim 14, which is a *Coryneform* bacterium.

17. The host cell of Claim 15, which is a *Coryneform* bacterium.

18. The host cell of Claim 14, wherein said host cell is selected from the group consisting of *Coryneform glutamicum, Corynebacterium acetoglutamicum, Corynebacterium acetoacidophilum, Corynebacterium melassecola, Corynebacterium thermoaminogenes, Brevibacterium flavum, Brevibacterium lactofermentum, Brevibacterium divaricatum.*

19. The host cell of Claim 15, wherein said host cell is selected from the group consisting of *Coryneform glutamicum, Corynebacterium acetoglutamicum, Corynebacterium acetoacidophilum, Corynebacterium melassecola, Corynebacterium thermoaminogenes, Brevibacterium flavum, Brevibacterium lactofermentum, Brevibacterium divaricatum.*

20. A *Coryneform* bacterium which comprises an attenuated lysR1 gene.

21. The *Coryneform* bacterium of Claim 21, wherein said lysR1 gene comprises the polynucleotide sequence of SEQ ID NO:1.

22. *Escherichia Coli* DSM 13616.

23. A process for producing L-amino acids comprising culturing a bacterial cell in a medium suitable for producing L-amino acids, wherein said bacterial cell comprises an attenuated lysR1 gene.

24. The process of Claim 23, wherein said bacterial cell is a *Coryneform bacterium or Brevibacterim.*

25. The process of Claim 24, wherein said bacterial cell is selected from the group consisting of *Coryneform glutamicum, Corynebacterium acetoglutamicum, Corynebacterium acetoacidophilum, Corynebacterium melassecola, Corynebacterium thermoaminogenes, Brevibacterium flavum, Brevibacterium lactofermentum, Brevibacterium divaricatum.*

26. The process of Claim 23, wherien said lysR1 gene comprisies the polynucleoitde sequence of SEQ ID NO:1.

27. The process of Claim 23, wherein said L-amino acid is L-lysine.

28. The process of Claim 23, wherein said L-amino acid is L-valine.

29. The process of Claim 23, wherein said bacteria further comprises at least one gene whose expression is enhanced, wherein said gene is selected from the group consisting of dapA, eno, zwf, pyc, and lysE.

30. The process of Claim 23, wherein said bacteria further comprises at least one gene whose expression is attenuated, wherein said gene is selected from the group consisting of pck, pgi, and poxB.

31. A process for screening for polynucleotides which encode a protein having LysR1 transcriptional regulatory activity comprising hybridizing the isolated

polynucleotide of Claim 1 to the polynucleotide to be screened; expressing the polynucleotide to produce a protein; and detecting the presence or absence of LysR1 transcriptional regulatory activity in said protein.

32. A process for screening for polynucleotides which encode a protein having LysR1 transcriptional regulatory activity comprising hybridizing the isolated polynucleotide of Claim 3 to the polynucleotide to be screened; expressing the polynucleotide to produce a protein; and detecting the presence or absence of LysR1 transcriptional regulatory activity in said protein.

33. A method for detecting a nucleic acid with at least 70% homology to nucleotide of Claim 1, comprising contacting a nucleic acid sample with a probe or primer comprising at least 15 consecutive nucleotides of the nucleotide sequence of Claim 1, or at least 15 consecutive nucleotides of the complement thereof.

34. A method for producing a nucleic acid with at least 70% homology to nucleotide of Claim 1, comprising contacting a nucleic acid sample with a primer comprising at least 15 consecutive nucleotides of the nucleotide sequence of Claim 1, or at least 15 consecutive nucleotides of the complement thereof.

35. A method for detecting a nucleic acid with at least 70% homology to nucleotide of Claim 3, comprising contacting a nucleic acid sample with a probe or primer comprising at least 15 consecutive nucleotides of the nucleotide sequence of Claim 3, or at least 15 consecutive nucleotides of the complement thereof.

36. A method for producing a nucleic acid with at least 70% homology to nucleotide of Claim 3, comprising contacting a nucleic acid sample with a primer comprising at least 15 consecutive nucleotides of the

nucleotide sequence of Claim 3, or at least 15 consecutive nucleotides of the complement thereof.

37. A method for making LysR1 protein, comprising: culturing the host cell of Claim 14 for a time and under conditions suitable for expression of LysR1 protein, and collecting the LysR1 protein.

38. A method for making LysR1 protein, comprising: culturing the host cell of Claim 15 for a time and under conditions suitable for expression of LysR1 protein, and collecting the LysR1 protein.

39. An isolated polypeptide comprising the amino acid sequence of SEQ ID NO:2.